

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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CLAIMS

2 I claim:

- 3 1. An apparatus for disbursing fertilizer and the like in a sprinkler system
- 4 having multiple zones with a plurality of zone valves comprising:
 - 5 a) a tank, having an inlet, an outlet and an open top;
 - 6 b) a dispenser tray having at least two compartments, each of said compartments
 - 7 having an open bottom;
 - 8 c) a bottom plate, said bottom plate being fixedly installed in said tank, said
 - 9 bottom plate also conforming to the size and shape of said dispenser tray, said bottom
 - 10 plate further having an opening formed therein, said opening conforming to the size
 - 11 and shape of one of said at least two compartments;
 - 12 d) a means for securing said dispensing tray in said open top of said tank;
 - 13 e) a means for turning said dispenser tray; and
 - 14 f) a means for controlling said means for turning said dispenser tray, whereby
 - 15 said means for controlling operates to coordinate the rotation of said dispenser tray to
 - 16 the operation of the plurality of zone valves.
- 17 2. The apparatus for disbursing fertilizer of claim 1 further comprising an outer
- 18 lid, removably installed on the open top of said tank.
- 19 3. The apparatus for disbursing fertilizer of claim 2 wherein the means for
- 20 securing said dispensing tray comprises a set of mating threads formed on said tank
- 21 and a matching set of threads formed on the outer lid.

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1 4. The apparatus for disbursing fertilizer of claim 1 wherein the means for
2 securing said dispensing tray comprises at least two latches attached to said tank and
3 said dispenser tray.

4 5. The apparatus for disbursing fertilizer of claim 1 wherein the means for
5 turning said dispenser tray comprises a motor.

6 6. The apparatus for disbursing fertilizer of claim 1 wherein the means for
7 controlling said means for turning said dispenser tray comprises:

8 a) a timer; and

9 b) a motor controller, attached to said timer, whereby when said timer activates
10 said motor controller causes the means for turning said dispenser tray to operate.

11 7. An apparatus for disbursing fertilizer and the like in a sprinkler system having
12 multiple zones with a plurality of zone valves comprising:

13 a) a tank, having an inlet, an outlet and an open top, and an outside;

14 b) a dispenser tray having at least two compartments, each of said compartments
15 having an open bottom;

16 c) a bottom plate, said bottom plate being fixedly installed in said tank, said
17 bottom plate also conforming to the size and shape of said dispenser tray, said bottom
18 plate further having an opening formed therein, said opening conforming to the size
19 and shape of one of said at least two compartments;

20 d) a means for securing said dispensing tray in said open top of said tank;

21 e) a motor attached to said dispenser tray; and

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1 f) a means for controlling said means for turning said dispenser tray, whereby
2 said means for controlling operates to coordinate the rotation of said dispenser tray to
3 the operation of the plurality of zone valves.

4 8. The apparatus for disbursing fertilizer of claim 7 further comprising an outer
5 lid, removably attached to said tank.

6 9. The apparatus for disbursing fertilizer of claim 8 wherein the means for
7 securing said dispensing tray comprises a set of mating threads formed on the outside
8 of said tank and a mating set of threads formed on said outer lid.

9 10. The apparatus for disbursing fertilizer of claim 7 wherein the means for
10 securing said dispensing tray comprises at least two latches attached to said tank and
11 said dispenser tray.

12 11. The apparatus for disbursing fertilizer of claim 7 wherein the means for
13 controlling said means for turning said dispenser tray comprises:

14 a) a timer;
15 b) a motor controller, attached to said timer, whereby when said timer activates
16 said motor controller causes the means for turning said dispenser tray to operate; and
17 c) a master control valve, said master control valve positioned in an inlet pipe.

18 12. The apparatus for disbursing fertilizer of claim 10 further comprising a
19 drain, positioned in the tank whereby when said drain is open, water contained in said
20 tank is evacuated through said drain.

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1 13. A method of disbursing fertilizer using an apparatus having an apparatus for
2 disbursing fertilizer in a sprinkler system having multiple zones with a plurality of zone
3 valves comprising: a tank having a plurality of threads formed thereon, having an inlet
4 pipe, an outlet and an open top; a dispenser tray having at least two compartments,
5 each of said compartments having an open bottom; a bottom plate, said bottom plate
6 being fixedly installed in said tank, said bottom plate also conforming to the size and
7 shape of said dispenser tray, said bottom plate further having an opening formed
8 therein, said opening conforming to the size and shape of one of said at least two
9 compartments; an outer lid, having a plurality of threads formed thereon; a motor
10 attached to said dispenser tray; and a means for controlling said means for turning said
11 dispenser tray, whereby said means for controlling operates to coordinate the rotation
12 of said dispenser tray to the operation of the plurality of zone valves comprising the
13 steps of:
14 a) securing said dispensing tray in said tank;
15 b) placing a quantity of fertilizer in the compartments of said dispensing tray,
16 producing plurality of quantities of fertilizer equal to the number of compartments in
17 said dispensing tray;
18 c) activating said means for controlling means for turning said dispenser tray;
19 d) filling said tank with a quantity of water;
20 e) causing one of said plurality of quantities of fertilizer to enter the tank;

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1 d) mixing said one of said plurality of quantities of fertilizer with said quantity of
2 water forming a mixture;
3 e) dispensing said mixture through the outlet;
4 f) rotating the dispenser tray after a prescribed operating time; and
5 f) repeating steps d-f for each of said plurality of compartments in said
6 dispensing tray.

7 14. The method of claim 13 wherein the mixture produced from one of said
8 plurality of quantities of fertilizer from a particular compartment and said quantity of
9 water is dispensed to a particular zone.

10 15. The method of claim 13 wherein the means for controlling means for turning
11 said dispenser tray further controls the plurality of zone valves.

12 16. The method of claim 15 wherein said means for controlling means for
13 turning said dispenser tray operates to switch from one of said plurality of zone valves
14 to another of said plurality of zone valves after a specified time.

15 17. The method of claim 16 where the apparatus further comprises:
16 a) a master control valve, installed in said input line; and
17 b) a drain line, installed in said tank.

18 18. The method of claim 17 wherein when said means for controlling means for
19 turning said dispenser tray operates to switch from one of said plurality of zone valves
20 to another of said plurality of zone valves said method further comprises the steps of:

21 a) closing said master valve; and

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- 1 b) draining said tank through said drain.
- 2 19. The method of claim 13 wherein the step of securing said dispensing tray in
- 3 said tank comprises the steps of:
 - 4 a) placing the dispensing tray into said tank;
 - 5 b) placing said outer lid onto the open top of said tank;
 - 6 c) engaging the plurality of threads on the tank with the plurality of threads on
 - 7 the outer lid; and
 - 8 d) screwing the outer lid onto the tank.